

Appl. No. 10/043,252
Amdt. dated June 7, 2004
Reply to Office Action of March 8, 2004

Amendments to the Claims:

Listing of Claims:

1. (Currently Amended) ~~A carbon monoxide modified ethylene copolymer composition having diminished tendency to cause discoloration on heating at 180° C of a plastic composition whose major polymeric component is polyvinyl chloride, comprising composition consisting of a carbon monoxide modified ethylene copolymer with an unsaturated ester softening monomer and from 0.03 part by weight to 10 parts by weight per 100 parts by weight of said carbon monoxide modified ethylene copolymer an amount, effective in diminishing said discoloration, of at least one inorganic perchlorate salt selected from the group consisting of alkali metal perchlorates and alkaline earth metal perchlorates.~~

2. (Canceled)

~~2~~ 3. (Original) The composition of claim 1, wherein said carbon monoxide modified ethylene copolymer is a carbon monoxide modified ethylene-vinyl acetate copolymer.

~~3~~ 4. (Original) The composition of claim 1, wherein said inorganic perchlorate is sodium perchlorate.

~~4~~ 5. (Original) The composition of claim ~~4~~ ³, wherein said perchlorate is sodium perchlorate monohydrate.

5/6. (Currently Amended) A plastic composition ~~having diminished tendency to discolor on heating at 180° C in the presence of a carbon monoxide modified ethylene copolymer, comprising~~ consisting of polyvinyl chloride, a carbon monoxide modified ethylene copolymer with an unsaturated ester softening monomer, ~~and an amount, effective in diminishing said tendency to discolor, of at least one inorganic perchlorate salt selected from the group consisting of alkali metal perchlorates and alkaline earth metal perchlorates, and, optionally,~~

A) at least one plasticizer;

B) at least one heat stabilizer selected from the group consisting of:

1) barium, calcium, magnesium, strontium, and zinc salts of aliphatic or aromatic non-nitrogenous monocarboxylic acids having from 6 to 24 carbon atoms;

2) substituted phenols having a molecular weight of at least 200 daltons;

3) ethers and esters having epoxide groups and molecular weights of at least 200 daltons; and

4) 1,3-dicarbonyl compounds having molecular weights of at least 200 daltons;

C) lubricants;

D) flame retardants;

E) colorants; and

F) fillers.

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~~6~~⁵ (Original) The composition of claim ~~6~~⁵, wherein said carbon monoxide modified ethylene copolymer is a carbon monoxide modified ethylene-vinyl acetate copolymer

~~7~~⁶ (Original) The composition of claim ~~7~~⁶, wherein the amount of carbon monoxide modified ethylene - vinyl acetate copolymer is in the range from 5 parts by weight to 75 parts by weight per 100 parts by weight of polyvinyl chloride.

~~8~~⁶ (Original) The composition of claim ~~8~~⁶, wherein the amount of said perchlorate is in the range from 0.03 parts by weight to 10 parts by weight per 100 parts by weight of carbon monoxide modified ethylene - vinyl acetate copolymer.

~~9~~⁶ (Original) The composition of claim ~~9~~⁶, wherein said inorganic perchlorate is sodium perchlorate.

11 - 12 (Canceled)

~~10~~⁶ (Currently Amended) The composition of claim ~~11~~⁶, wherein said at least one plasticizer is present and is selected from the group consisting of dialkyl phthalates and trialkyl trimellitates having independently in each alkyl group seven to eleven carbon atoms.

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11/14. (Currently Amended) The composition of claim 12⁶, wherein said at least one heat stabilizer is present and is a barium, calcium, magnesium, strontium, or zinc salt of a monocarboxylic acid having 7-24 carbon atoms.

⁶
12/15. (Currently Amended) The composition of claim 12⁶, wherein said at least one heat stabilizer is present and is an epoxide compound.

¹³
13/16. (Original) A masterbatch composition adapted for safe storage, transport, and compounding with a plastic composition whose major polymeric component is polyvinyl chloride, comprising consisting of carbon monoxide modified ethylene - vinyl acetate copolymer and at least one inorganic perchlorate salt selected from the group consisting of alkali metal perchlorates and alkaline earth metal perchlorates, said masterbatch containing from 7 parts by weight to 50 parts by weight of said perchlorate salt per 100 parts by weight of carbon monoxide modified ethylene -vinyl acetate copolymer, and, optionally,

A) at least one plasticizer;

B) at least one heat stabilizer selected from the group consisting of:

- 1) barium, calcium, magnesium, strontium, and zinc salts of aliphatic or aromatic non-nitrogenous monocarboxylic acids having from 6 to 24 carbon atoms;
- 2) substituted phenols having a molecular weight of at least 200 daltons;
- 3) ethers and esters having epoxide groups and molecular weights of at least 200 daltons; and

4) 1,3-dicarbonyl compounds having molecular weights of at least 200

daltons;

C) lubricants;

D) flame retardants;

E) colorants; and

F) fillers.

¹⁴~~17~~ (Original) ¹³ The masterbatch composition of claim ~~16~~, containing from 10 parts by weight to 30 parts by weight of said perchlorate salt per 100 parts by weight of carbon monoxide modified ethylene - vinyl acetate copolymer.

¹⁵~~18~~ (Original) ¹³ The masterbatch composition of claim ~~16~~, wherein said perchlorate is sodium perchlorate.

¹⁶~~19~~ (Original) ¹⁵ The masterbatch composition of claim ~~18~~, wherein said perchlorate is sodium perchlorate monohydrate.

¹⁷~~20~~ (Currently Amended) A method of diminishing the tendency to cause reducing discoloration on heating at 180° C of a ~~carbon monoxide modified ethylene - vinyl acetate copolymer containing plastic composition whose major polymeric component is~~ consisting of 100 parts by weight of polyvinyl chloride, from 5 parts by weight to 75 parts by weight of a

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carbon monoxide modified ethylene - vinyl acetate copolymer, and, optionally,

A) at least one plasticizer;

B) at least one heat stabilizer selected from the group consisting of:

1) barium, calcium, magnesium, strontium, and zinc salts of aliphatic or aromatic non-nitrogenous monocarboxylic acids having from 6 to 24 carbon atoms;

2) substituted phenols having a molecular weight of at least 200 daltons;

3) ethers and esters having epoxide groups and molecular weights of at least 200 daltons; and

4) 1,3-dicarbonyl compounds having molecular weights of at least 200 daltons;

C) lubricants;

D) flame retardants;

E) colorants; and

F) fillers;

~~comprising the steps of mixing polyvinyl chloride with carbon monoxide modified ethylene - vinyl acetate copolymer and with~~ the step of adding to said composition at least one inorganic perchlorate salt selected from the group consisting of alkali metal perchlorates and alkaline earth metal perchlorates, such that the composition contains from 5 parts by weight to 75 parts by weight of carbon monoxide modified ethylene - vinyl acetate copolymer per 100 parts by weight of polyvinyl chloride and from 0.03 parts by weight to 10 parts by weight of the at least one inorganic perchlorate salt selected from the group consisting of alkali metal

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perchlorates and alkaline earth metal perchlorates per 100 parts by weight of the carbon monoxide modified ethylene - vinyl acetate copolymer.

21. (Original) In ~~a carbon monoxide modified ethylene - vinyl acetate copolymer~~ containing combination with a plastic composition whose major polymeric constituent is consisting of 100 parts by weight of polyvinyl chloride, from 5 parts by weight to 75 parts by weight of a carbon monoxide modified ethylene - vinyl acetate copolymer, and, optionally,

A) at least one plasticizer;

B) at least one heat stabilizer selected from the group consisting of:

1) barium, calcium, magnesium, strontium, and zinc salts of aliphatic or aromatic non-nitrogenous monocarboxylic acids having from 6 to 24 carbon atoms;

2) substituted phenols having a molecular weight of at least 200 daltons;

3) ethers and esters having epoxide groups and molecular weights of at least 200 daltons; and

4) 1,3-dicarbonyl compounds having molecular weights of at least 200 daltons;

C) lubricants;

D) flame retardants;

E) colorants; and

F) fillers; the improvement ~~consisting of the diminishment of the tendency to discolor upon heating at 180° C of said composition by the addition thereto of an amount,~~

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~~effective in diminishing said discoloration, of that comprises from 0.03 part by weight to 10~~
~~parts by weight per 100 parts by weight of the carbon monoxide modified ethylene - vinyl~~
~~acetate copolymer of~~ at least one inorganic perchlorate salt selected from the group consisting
of alkali metal perchlorates and alkaline earth metal perchlorates.